Coal and Energy Development

Speech for Marty Huelsmann to
the Kenergy Industrial Resource Committee

I. Introduction

A. Thank you for the opportunity to speak to you today regarding Coal and energy development in Kentucky. I bring you greetings from the Kentucky Public Service Commission, where almost nothing is happening these days.

B. Actually, we have a lot going on at the Commission right now -- some of the biggest cases to have ever darkened our door.

1. In Telecommunications
   a. Dealing with Competition issues -- one of our larger telephone utilities has filed for permission to provide local service in their region -- a case that will ultimately be heard at the FCC, but not before a thorough examination by the Kentucky PSC.
   b. Broadband deployment -- providing high speed data access, and the capability to establish private local area networks so you can access your work from your home. Big Economic Development issue.
2. Natural Gas Prices
3. Water - Gov's initiative, expanding service by 2020.
4. Electricity -- Mergers
   i. You may or may not have followed that acquisition case, but let me briefly share with you some information about E.On.
   ii. E.On's utility subsidiary supplies almost 33% of Germany's electricity and over 30 percent of its natural gas.
   iii. They own a total of 29,000 MW of generating capacity and supply electricity to approximately 25 million customers in Sweden, Switzerland, Netherlands, Italy, Poland, Russia, Latvia, Hungary, Austria, and the Czech Republic.
   iv. They are a financially strong company with a market capitalization as of April 2001 of approximately $35.7 billion in equity and no debt. Upon completion of the acquisition, they will be the supplier of electricity and natural gas to about 30 million customers and will have available resources of about $45 billion to pursue its strategic goals of growing its energy business.
   v. As of the end of 2000, E.On had almost $100 billion in assets, with an expansive access to international capital markets.
   vi. We believe that with their commitment to place their American headquarters in Kentucky, they will bring a significant amount of money and economic activity into the state.

C. Which brings me to why I am here today. Electricity is taking up a good bit of our time. The drama in California, transmission projections around the country, restructuring issues -- we're following all of it.
D. Over the last 30 years, the energy industry has changed dramatically. From the oil embargoes of the 1970s to the environmental discussions of the 80s and the new emission reduction requirements of the 1990s, the last quarter of a century has been a dynamic one.
E. As we move past the year 2000, and see the restructuring of the electric industry, the unbundling of the gas industry, and the resulting situations that states around the nation find themselves in, we are facing a new energy paradigm. The focus and debate on a national energy policy demonstrates that we are entering a new generation in the energy industry. This new generation needs new answers to new problems.
F. In Kentucky, this new paradigm can be a time of golden opportunity. In a time when we see the importance of having a balanced energy policy, it is an ideal time to highlight the technological advances in the use of coal for electricity generation. It is also a time for Kentucky to benefit from having historically low prices for electricity in drawing new business and interest to the state.
G. I'm going to cover three major points today.
    1. First, I want to talk about how electricity generation has become central to our lives and to our economy, and why that makes planning for the future so important.
    2. Second, I want to talk about some lessons that California taught us over this past year.
    3. Finally, I want to talk about how Kentucky is evaluating the new energy paradigm, how coal fits into that new future, and what Kentucky is doing in an effort to act on lessons learned from California.

II. First, Let's talk about how electricity generation has become central to our lives and to our economy.
A. Electricity central to Economic Development
    1. In a paper called "Coal for the Future: Sustainable Development," Mike Musulin pointed out that in comparing the ranking of states with the best and worst job prospects with the price of electricity in those states, you see a strong correlation between the two factors. He states "The 12 states with the lowest priced electricity include seven states with the best job prospects. Similarly, 12 states with the highest priced electricity include 11 of the states with the worst job prospects."
    2. Kentucky has always enjoyed some of the lowest priced electricity in the nation. That low-cost electricity has traditionally been one of our most powerful tools in economic development efforts. (As a side note, I know that you don't need me to point out that that low-

cost electricity has traditionally been because of the abundance and availability of coal in this state.)

B. Demand for electricity continues to grow.
   1. EIA projects that by 2020, 1,310 new power plants, of an assumed average of 300 megawatts each, will be needed to meet growing electricity demand and to replace aging power plants.
   2. The EIA also projects a 1.2% growth per year of energy consumption, with the most rapid growth being for computers, electronic equipment, and appliances. For commercial energy consumption, a growth rate of 1.4% is projected, again, largely for the increased use of computer and electronic equipment and telecommunication needs. EIA projects the demand of electricity itself to grow at a rate of 1.8% per year through 2020.

C. We may be underestimating growth in demand for electricity.
   1. The projections according to EIA are, we have to believe, based on reliable data. But projections can be wrong, and if we underestimate growth in demand, we can get into trouble.
   2. According to Matthew Simmons, president of Simmons and Company, when the National Petroleum Council demand task force was preparing its long-term demand forecasts, they underestimated the growth in electricity demand by half. He says that in the year 2000, electricity demand grew twice as fast as the projected 2.1%.
   3. Underestimating growth in electricity demand contributed to the kinds of problems we're seeing now in California. In 1998, the California Energy Commission forecasted annual demand growth of 2.3% between 1998 and 2004. According to the Edison Electric Institute, the actual monthly peaks in the spring of 2000 ranged from 5.3% percent to 21 percent more than 1999.

Transition Statement: And that brings me to my next point -- California. The events unfolding in California hold lessons for the rest of us throughout the nation as we look at energy development in our state and in the country.

III. As important as electricity is to our homes and our economy, it is critical that we pay attention to the energy industry throughout the United States, particularly the events in California, and learn how to deal with the new paradigm in the energy industry. Although the market was designed around expected electricity surpluses, the state has been dependent on others for outside power.

A. The Situation.
   1. According to Alaska Senator Frank Murkowski, California depended on 25% of its energy coming from outside the state.
   2. No major power plants have been built in California in the last 10 years, even though power consumption is up 20%
   3. Utilities have been caught between soaring prices and price caps, and are now dealing with bankruptcy.

4. The situation in California is affecting the prices of electricity in other states.
    a. According to Arizona Governor Jane Hull, bills for one small Arizona utility were expected to rise 300% in February because of the energy crisis in California.
    b. Although Kentucky has always claimed the "third lowest price" electricity state, we now believe that our prices are lower than Idaho and the other states that have consistently been among the lowest, because the California crisis is affecting them there.

B. The Lessons
1. Look before you leap.
    a. The plan in California was bad from the start -- created problems by removing price signals, capped utility rates, but not generation rates, eliminated long term contracts resulting in volatile spot market.
    b. California didn't account for all the contingencies -- the massive growth of Silicon Valley, transmission problems, Integrated Resource Planning abandoned in favor of market forces, siting problems.
2. The Blame Game -- Political wrangling doesn't keep the lights on.
    a. The state blames the Feds, the Feds blame the state.
        i. Davis v. Bush in "informal conversation" about the state of electricity in California. Hard lines drawn -- no solutions formed.
        ii. CA AG, et al v. FERC - Lawsuits attempting to force action by FERC to relieve California.
    b. No matter where you place the blame, it doesn't change the picture and the reality for coming up short on electricity supply and high on price..
        i. NERC projected an average of 15 hours a week of blackouts in CA this summer.
        ii. Refineries were saying that unless they are exempt from the blackouts, the price of gasoline, already above $2.00, will climb even higher.
        iii. Another interesting note, real estate values have grown much higher near hospitals because they are non-interruptible customers.
    c. Diversity of Generation is important.
        i. The higher prices have been blamed in part on the dependence on natural gas for generation. As demand for gas grew, so did the price. As the price for gas grew, so did the price for electricity. A little more diversity could lessen the impact of some of that.
        ii. California did have other sources of generation, including nuclear -- proven to be very expensive, and hydro, which was in very low supply during such a dry year.

d. As another interesting note, Texas, long seen as the model for how to accomplish electric restructuring, is now experiencing problems that reflect the California experience. Within one week of operating under a deregulated energy power market, generators charged $1,000 per megawatt for standby power. At the same time, California, which saw the $1000 megawatt late last year, was selling power for $50 a megawatt. ERCOT officials blamed human error and not price gouging for the Texas spike, but the incident points to the uncertainty and the potential for serious consequences that exist under the restructuring paradigm.

Transition Statement: Now that we've looked at the importance of electricity planning, and looked at the lessons learned from California, let me finally discuss for a few moments how Kentucky is applying those lessons as we look at energy development and the use of coal in planning for the new energy paradigm..

IV. Kentucky and the new energy paradigm. As Kentucky learns lessons from California, and plans for its own energy future, it seems that there are several values that Kentucky holds onto as we plan for the future. These include 1. Low cost electricity, 2. The use of Kentucky coal, 3. Addressing Environmental concerns, and 4. Enhanced Economic Development.

A. Earlier this year, the Governor established an Energy Advisory Board, that will be administered by the PSC, and includes representatives from all major stakeholder groups in Kentucky, including government, industry, environment, consumers, and economic development. The governor is taking an active role in this board, so prepare for some serious involvement on his part! The goals of the board embrace all of the values I just mentioned in planning for Kentucky's electricity future. The Board will:

1. Develop a statewide energy policy.
2. Analyze energy markets throughout the country, and devise a strategy that maximized Kentucky's low cost advantages.
3. Recommend policies that promote affordable energy supplies, and improve reliability.
4. Recommend long-range energy resource development in the state.
5. Analyze existing generation in relation to long-term demand for energy.
6. Look at the forecasting models, and determine energy demand based on economic growth in Kentucky.
7. Look at how plans for conservation can help meet future energy requirements.
8. Devise a strategy to maximize federal grant opportunities for energy research, with an emphasis on clean coal technology.

9. Look at options for utilities in Kentucky, and how they need to be positioned as the lines begin to blur with electricity restructuring happening all around us.

B. Merchant plants are another factor in Kentucky that the PSC does not really address, but the Board will be able to take into account.
   1. We have been notified of several (about 12) merchant plants proposed in the state, but we don't have jurisdiction over them.
   2. Only two of those are coal (Ky. Pioneer and Kentucky Mountain Power)
   3. We are unsure how many of these plants will actually be built and go online.
   4. Part of the Board's investigation will likely examine the impact that these plants could potentially have on the electricity in the state, in terms of the price (since most of them are natural gas fired plants), as well as how they will affect our transmission capacity.

C. Time for Coal to step into the spotlight. With the need for electricity growing, and the prices of natural gas rising, this could be a golden opportunity for the coal industry/ With the strides that have been made in Clean Coal Technology, Kentucky coal can regain some of the ground it lost during the environmental debates of the last 20 years.
   1. We have seen some neat projects from the Clean Coal Technology programs.
      a. Wabash River Project in Terre Haute Indiana
      b. EnviroPower project for Hazard, using fluidized bed technology.
      c. Kentucky Pioneer Project - uses a coal gasification technology which is better for the environment than some of the other clean coal technologies.
   2. Price-wise this is a good time for coal. Clean Coal Technology becomes cost effective when natural gas prices are at about $5. Most financial projections indicate that natural gas industry has found a new floor at around 4-5$ per Mcf. With a projected 92% of new generation being fueled by natural gas, that new price floor becomes quite significant.
   3. With a President and Vice President that continue to push for a policy that allows for more exploration and drilling on federal lands, and the controversy surrounding those kinds of policies, this is a great time for coal to step in and offer itself, with its competitively low emissions technology, as a "less controversial" resource (that's a new one for coal, I know!). A resource that is plentiful in this country.
   4. Mitch McConnell has announced his support for a plan that would boost coal use by offering money for research into cleaner-burning methods and tax breaks for utilities that use them. He stated "We haven't done nearly as much in that field as we should. We can produce this power cleanly."

5. I saw in a recent Courier Journal article that Representative Ed Whitfield also has plans to submit legislation that will combine tax credits and additional spending for clean-coal technology at new and existing plants.
6. Despite the controversy that sometimes surrounds the use of coal in electric generation, it has always been, and will continue to be an important part of the generation of electricity in this country.
    a. 98% of Kentucky's power comes from burning coal.
    b. 55% of the nation's electricity comes from the use of coal in electric generation.
7. It is important to remember the lesson from California, however, that political wrangling won't keep the lights on. We have to recognize that coal is of concern as it impacts the environment. As we pursue Clean Coal technologies, and uncover cleaner uses for coal, we have to remember that the most effective and efficient way to increase the use of coal is to take those environmental concerns seriously. It is important to remember that the best strategy will address those concerns and will preserve the clarity of our air, the quality of our water, and the health of our citizens.

V. In conclusion, I have offered you a picture on where Kentucky stands in terms of coal and energy development. I have also demonstrated how our planning fits into what has gone on around us in this country, and the lessons that we can learn from those situations to protect the citizens of Kentucky.

Through a thorough examination of the situations around us, and how they relate to Kentucky, it is my hope that working together with all of the stakeholders, we can make a successful transition into the new energy paradigm.

Thank you for the invitation to speak to you today, and I will be happy to take any questions that you may have at this time.